



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

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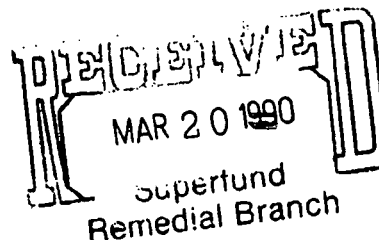
Ref: 8HWM-SM

MEMORANDUM

TO: Paul Mushovic, RPM
Monticello Mill Site

FROM: Chris Weis, Toxicologist
Technical Section

SUBJECT: Revised Draft Final ROD Risk Assessment for the
Monticello Mill Site



I have reviewed the risk assessment portion of the Revised Draft Final ROD and have the following comments regarding its content.

GENERAL COMMENTS:

The methodology used to generate the document is generally out-of-date. Improvement in Regional consistency regarding risk assessments will require adherence to the new Risk Assessment Guidance for Superfund (RAGS) and the use of more recent information available to assess toxicity. The IRIS files are updated twice monthly and need to be checked periodically. Additionally, for those who cannot access IRIS (Region VIII now encourages all contractors to obtain access to IRIS), the HEAST tables (most recent quarter is now 4th quarter 1989) should be referenced.

The basic format for risk assessments should follow that outlined in the new RAGS guidance. Briefly, this format follows traditional risk assessment format (hazard identification, exposure assessment, toxicity assessment, and risk characterization). The document presented lacks the inclusion of the toxicity assessment all together. The other sections are dealt with rather briefly.

SPECIFIC COMMENTS:

1) Section 6.3; Page 43; Paragraph 2.

The background levels mentioned here should be referenced. Methodology and location of the background sample collecting should be noted here, and it should be indicated where this information occurs elsewhere in the document.

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2) Section 6.3; Page 43; paragraph 3.

A major source of incidental ingestion of contaminants is from household dust. Depending upon the assumptions used, this pathway may have been addressed under "ingestion of contaminated soil". Some reference to this pathway should be included.

3) Section 6.4; Page 46; Estimation of exposure to noncarcinogenic contaminants. =

Please see the *Risk Assessment Guidance for Superfund, Volume I Human Health Evaluation Manual (Part A)* for the equations to be considered when assessing exposure. The AIC has been, in all cases, replaced by an appropriate RfD. These values may be found on IRIS or are tabled in the HEAST. Please be sure that the most current numerical toxicity estimates are used for judging risk at the site. The AIC for lead has been withdrawn. Since lead is being used as an indicator chemical at the site, and the Region is presently conducting several assessments of sites where lead is a problem, we request that the assessment of lead be conducted consistent with Regional activities on other sites.

4) Section 6.4; Page 50; Paragraph 5.

Uncertainty factors are not generally applied when assessing carcinogenic risk. Please delete the reference to uncertainty factors for carcinogenic risk estimation or provide further explanation. =

The risk assessment terminology used throughout the document seems to be very old. Potency factors are now referred to as Slope factors. Please apply current terminology. The slope factor for arsenic is out-of-date. As arsenic is of major concern to the region, it is important that consistency among sites be applied. Please use current numerical estimates of toxicity throughout the document.

All mention of slope factors whether in the text of the document or tabled should be accompanied by a corresponding weight of evidence classification.

5) Section 6.4; Page 53; Paragraph 1.

The Environmental Protection Agency has established a target range of 10^{-6} - 10^{-4} for carcinogenic risk. The document incorrectly indicates that the Agency assesses risk to the 10^{-7} level.

6. Section 6.4; Page 53; Table 6-12.

All carcinogenic risk estimates should be presented using one significant figure only.

cc: P. Arell
J. Silvernale